

**IN THE CLAIMS:**

Please reconsider the claims as follows:

1. (currently amended) A method of temperature stabilization of a wavelength of a laser, comprising:

measuring a representative temperature of the laser;  
measuring the wavelength using an internal etalon ~~of the wavelength~~;  
defining a correction factor for the internal etalon based on a wavelength measurement made using an external meter ~~of the wavelength~~; and  
operating a temperature control module for the laser ~~defining the representative temperature at a set point corresponding to a generation of an optical power to cause laser emission~~ at a wavelength equal to a sum of the wavelength measured using the internal etalon and the correction factor.

2. (original) The method of claim 1 wherein the wavelength of the laser is measured using the external meter prior to operating the laser in an optical transmission system.

3. (original) The method of claim 1 wherein the correction factor is defined prior to operating the laser in an optical transmission system.

4. (original) The method of claim 1 wherein the representative temperature is a temperature selected from the group consisting of a temperature of a laser chip of the laser, temperature of the internal etalon, a temperature of the module, a temperature of a submount housing the laser chip and the internal etalon, and a temperature of a medium between the laser chip, the internal etalon, and the module.

5. (currently amended) The method of claim 1 wherein the temperature control module comprises a thermoelectric cooler/heater.

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6. (original) The method of claim 1 wherein the representative temperature is measured using a thermistor or a thermocouple.
7. (original) The method of claim 1 wherein an accuracy of the external meter is equal or greater the accuracy of the internal etalon.
8. (original) The method of claim 1 wherein the internal etalon measures the wavelength using a method, comprising:  
defining of a ratio between a first electrical signal proportional to the output power at an input of the internal etalon and a second electrical signal proportional to the output power at an output of the internal etalon.
9. (currently amended) ~~The method of claim 1~~ A method of temperature stabilization of a wavelength of a laser, comprising:  
measuring a representative temperature of the laser;  
measuring the wavelength using an internal etalon;  
defining a correction factor for the internal etalon based on a wavelength measurement made using an external meter; and  
operating a temperature control module for the laser at a set point to cause laser emission at a wavelength equal to a sum of the wavelength measured using the internal etalon and the correction factor;  
wherein the correction factor is defined using a method, comprising:  
(a) measuring the wavelength of the laser using the internal etalon;  
(b) measuring the wavelength of the laser using the external meter;  
(c) measuring the representative temperature;  
(d) modifying a bias current of a laser chip of the laser;  
(e) adjusting the representative temperature until the external meter measures the same wavelength as at the step (b);  
(f) defining a difference in the representative temperature at the steps (c) and (e); and

(g) measuring the wavelength using the internal etalon.

10. (currently amended) ~~The method of claim 1~~ A method of temperature stabilization of a wavelength of a laser, comprising:

measuring a representative temperature of the laser;

measuring the wavelength using an internal etalon;

defining a correction factor for the internal etalon based on a wavelength measurement made using an external meter; and

operating a temperature control module for the laser at a set point to cause laser emission at a wavelength equal to a sum of the wavelength measured using the internal etalon and the correction factor;

wherein the laser assembly comprises:

a laser chip disposed on a submount;

the internal etalon disposed on the submount;

the module controlling a temperature of the laser chip and the first internal etalon;

a temperature sensor;

a photodetector of an optical signal proportional to a laser output power at an input of the internal etalon; and

a photodetector of an optical signal proportional to the laser output power at an output of the internal etalon.

11-17. (Cancelled)

18. (new) The method of claim 9 wherein the wavelength of the laser is measured using the external meter prior to operating the laser in an optical transmission system.

19. (new) The method of claim 9 wherein the correction factor is defined prior to operating the laser in an optical transmission system.

20. (new) The method of claim 9 wherein the temperature control module comprises a thermoelectric cooler/heater.
21. (new) The method of claim 9 wherein the internal etalon measures the wavelength using a method, comprising:  
defining of a ratio between a first electrical signal proportional to the output power at an input of the internal etalon and a second electrical signal proportional to the output power at an output of the internal etalon.
22. (new) The method of claim 9, wherein the representative temperature in step (c) corresponds to the temperature at which steps (a) and (b) are performed; and step (g) is performed at the representative temperature of step (e).
23. (new) The method of claim 22 wherein the wavelength of the laser is measured using the external meter prior to operating the laser in an optical transmission system.
24. (new) The method of claim 22 wherein the correction factor is defined prior to operating the laser in an optical transmission system.
25. (new) The method of claim 22 wherein the representative temperature is a temperature selected from the group consisting of a temperature of a laser chip of the laser, temperature of the internal etalon, a temperature of the module, a temperature of a submount housing the laser chip and the internal etalon, and a temperature of a medium between the laser chip, the internal etalon, and the module.